

FIRST RECORD OF *WORMALDIA SUBNIGRA* MCLACHLAN, 1865 (TRICHOPTERA) IN HUNGARY

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A *WORMALDIA SUBNIGRA* MCLACHLAN, 1865 (TRICHOPTERA) ELSŐ ELŐFORDULÁSA MAGYARORSZÁGON

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ABSTRACT: Within the framework of the border water agreement between Hungary and Romania, macroinvertebrate sample was taken in September 2013 from the Black Cris (Fekete-Körös) at Sarkad (Malom-fok). The sample included one larva of *Wormaldia subnigra*, a caddisfly species proved to be new to the Hungarian fauna. The larvae of this species inhabit rivulets and small to medium sized rivers; they can be found at various current velocities. *Wormaldia subnigra* is widespread in Europe and known from N- and NW-Russia. The appearance of the species is likely to be a consequence of a drift from the Romanian section of the river.

Key words: Philopotamidae, Fekete-Körös, lowland river

KIVONAT: A magyar-román határvízi egyezmény előírásának megfelelően végzett biológiai mintavételek során 2013 szeptemberében makrogerinctelen mintát vettünk a Fekete-Körös sarkadi szelvényéből (Malom-fok). A mintából előkerült a *Wormaldia subnigra* tegzesfaj lárvájának egy egyede, mely faj a magyar faunára újnak bizonyult. A *Wormaldia subnigra* európa szerte elterjedt tegzesfaj, egyedei a kisebb patakoktól a síkvidéki közepes folyókig fordulhatnak elő. Mostani megjelenése a hazai faunában valószínűleg lesodródás eredménye lehetett a folyó romániai szakaszáról. Minthogy a környező országokban a faj előfordul, így megjelenése a hazai faunában várható volt.

Kulcsszavak: Philopotamidae, Fekete-Körös, síkvidéki folyó

Introduction

The caddisfly genus *Wormaldia* includes many widespread species within the family Philopotamidae. The number of species occurring in Europe is different on the basis of various databases. According to the database of Fauna Europaea 26 *Wormaldia* species occur in Europe (MALICKY 2013), while the European species list prepared by GRAF et al. (2008) comprises 27 species and 20 subspecies, and a presence of 39 species in the West Palearctic Region is reported by the Trichoptera World Checklist (MORSE 2014). Up to now only *Wormaldia occipitalis* (Pictet, 1834) was the only representative of this genus in the Hungarian caddisfly fauna (NÓGRÁDI and UHERKOVICH 2002). Larvae of the Central-European species can be surely distinguished by morphological characters. The larvae of *Wormaldia occipitalis* and *W. subnigra* species differ from each other in the shape of pronotum. While the posterior indentation on dorsal side of pronotum is deep in the case of *W. subnigra*, this indentation is shallow for the larvae of *W. occipitalis* (WARINGER and GRAF 1997, LECHTHALER and STOCKINGER 2005). On the other hand *W. subnigra* has a black colored bristle on the coxa of the first leg while this bristle is pale on *W. occipitalis* (PITSCH 1993). The third species of this genus occurring in Central Europe, *Wormaldia copiosa* (McLachlan, 1868), has a roughly “U” or “V”-shaped notch on the anterior margin of frontoclypeus, while the other two species have smooth anterior margin (LECHTHALER and STOCKINGER 2005).

Material and methods

Macroinvertebrate sampling was conducted in the frame of the monitoring of the biological quality elements required by the border water agreement between Hungary and Romania, using the sampling methods applied in the Water Framework Directive, too. Collection was made from the Fekete-Körös (Black Cris) near the Hungarian-Romanian border at Sarkad (Malom-fok) (N: 46°42'06"; E: 21°25'21") on 18 September 2013. Material was preserved in 70% ethanol. Identification of the specimen was made using the keys proposed by PITSCH (1993), WARINGER and GRAF (1997), LECHTHALER and STOCKINGER (2005).

Results and discussion

Systematic monitoring of biological elements conducted for several years according to the prescriptions of the Water Framework Directive and Hungarian-Romanian border water agreement has provided a lot of useful data on several freshwater macro-invertebrate groups. Regular samplings contribute to the knowledge of the distribution and ecology of particular macroinvertebrate taxa and in some cases species new for the Hungarian fauna could also be detected. A good example of the latter case is the first occurrence of the caddisfly *Wormaldia subnigra* McLachlan, 1865 in Hungary, collected from the river Fekete-Körös (Black Cris) at Sarkad (Malom-fok) in September 2013. The Trichoptera fauna of this site is not unknown, since samplings of caddisflies were made from this location by various collectors. A long-term study conducted by NÓGRÁDI and UHERKOVICH (1996) who processed the caddisfly material captured by light trap set up at Sarkad (Malom-fok)

but specimens of *Wormaldia* sp. were not collected. MÓRA and his co-workers did also not capture this species in the frame of a broad survey carried out in this area by sampling trichopteran and other macroinvertebrate larvae (MÓRA and CSABAI 2002, MÓRA et al. 2002).

The larvae of *Wormaldia subnigra* inhabit rivulets and small to medium sized rivers in the lowlands (GRAF et al. 2008) and can be found at various current velocities. The species is widespread in Europe and also known from N- and NW-Russia (LECHTHALER and STOCKINGER 2005). Since *W. subnigra* is present in the neighboring countries (ÚJVÁROSI et al. 2008; OLÁH 2010; IBRAHIMI et al. 2012) its appearance in the local fauna could have been expected, but it should be emphasized that the occurrence is likely to be a consequence of drift from the Romanian section of the river.

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